
Wildfire smoke resources for community health partners and local governments

Wildfire smoke is a complex mixture of air pollutants that can impact people of all ages in various ways. Reducing exposure to wildfire smoke is the best way to protect population health.

[Health Emergency Management BC](#), [First Nations Health Authority](#), [Métis Nation British Columbia](#) and [Island Health](#) have joined to create this list of health recommendations, resources and tools to help communities cope with wildfire smoke exposure. The resources provided here are intended to complement the innovative smoke preparedness work already underway in community.

Table 1. Populations [most susceptible to wildfire smoke](#)

People with chronic respiratory conditions (e.g., asthma or COPD)	People with physically demanding jobs and those who work outdoors
People with heart disease, diabetes or other chronic health conditions	Infants and young children
Older adults	Pregnant people

Table 2. Signs of [wildfire smoke-related illness](#)

Mild	More Severe
Eye irritation, runny nose, sore throat, wheezing, mild cough, headaches	Shortness of breath, bad cough, dizziness, chest pain, fast-beating/fluttering heart
Reduce exposure by reducing outdoor activity and implementing indoor air cleaning	SEEK MEDICAL ATTENTION

Wildfire smoke may also impact [mental health](#), in some cases leading to increased anxiety, depression and feelings of stress or frustration.

Health recommendations for wildfire smoke planning

- **Maintain situational awareness** among your team by monitoring the [Air Quality Health Index](#) (AQHI) or other real-time air quality data such as the [Smoky Skies Bulletin](#), interactive [smoke forecast](#) mapping or [AQHI maps](#). The [WeatherCAN](#) app can also send customized notifications.

In addition, your **local PM_{2.5} sensor network** can provide extremely localized, timely information on changing air quality. The [Air Quality Map](#), created by the University of Northern British Columbia and Environment and Climate Change Canada, corrects the data available from public sensors and provides information on AQHI and actions to take.

- **Consider developing a community [wildfire smoke response plan](#)** and provide training to staff and volunteers to ensure they know what to do to protect their clients, students, the public and themselves during wildfire smoke events.
 - Prepare staff and volunteers to [recognize the signs of illness from wildfire smoke](#) exposure (see Table 2 above) and know when to seek medical care.
 - Communicate your response plan with community members ahead of time to build confidence and enhance implementation when needed.
 - Encourage community members to check on neighbours during wildfire smoke events.

- **Improve the indoor air quality of your facilities.** Consider developing [wildfire smoke readiness plans](#) for each of your facilities, which may involve the following:
 - Ensure the buildings' heating, ventilation and air conditioning (HVAC) systems are well-maintained and functioning. For filtration, MERV-13 filters are considered effective in removing wildfire smoke particles. Ensure filters are replaced as needed. If HVAC upgrades are possible, consider making ventilation systems High Efficiency Particulate Air (HEPA) filter-ready, such that standard filters can be swapped out for HEPA filters during smoke events.
 - [Filtration in institutional settings](#) should be considered to support clients in community.
 - If central filtration with MERV-13 filters is not possible, portable air cleaners with HEPA filtration may be an option. Ensure the unit's clean air delivery rate is [suitable for the room's size](#) and avoid air cleaners that produce ozone.
 - If necessary, home-made box fan air cleaners can be used to create a clean air space, based on [instructions and safety advice](#) from the BCCDC.
 - Air-cleaning works best when windows and doors are closed, so energy-efficient cooling systems (e.g. ductless heat pumps or air conditioners) may also be necessary on hot days.
 - PM_{2.5} monitoring using a low-cost sensor can show whether filtration has been effective compared to the [nearest outdoor sensor](#).
 - Health Canada has guidance on creating [cleaner air spaces](#) during wildfire smoke events.

- **Encourage community members** to engage in personal preparedness, as outlined in Prepared BC's [Wildfire Preparedness Guide](#).
 - Island Health has developed a complementary two-pager entitled [How to protect yourself from smoke](#) to provide additional health advice for smoke resilience. This can be printed and distributed to community members

What to do during a wildfire smoke event

- Monitor rapidly changing air quality conditions through [your local AQHI](#) or the [WeatherCAN app](#).
- Drink plenty of water and stay cool.
- Encourage those with chronic health conditions (e.g., asthma) to follow their care plan, have any necessary medications on hand and seek additional advice from their physician if needed.
- Reduce outdoor activity during periods of poor air quality, especially [outdoor exercise](#). Use [this AQHI table](#) to guide actions for the general public vs. people at higher risk.
- Activate measures to improve or maintain indoor air quality, as above.

- While [respirators and multilayer face masks](#) provide good protection if well-fitted, simple one-layer cloth masks, bandanas or gaiters, etc., offer low protection whether wet or dry.

Coping with dual wildfire and extreme heat events

In the short term, overheating poses a greater health risk than smoke inhalation. Many people are at risk of potential severe injury and death if they overheat, while a much smaller proportion are at risk of severe acute respiratory or cardiovascular attack. Individuals most at risk from smoke are also at risk from heat, and older adults may begin to experience heat impacts at temperatures above 26 C. Therefore, most people should prioritize staying as cool as possible in very hot weather.

Seek cooler, cleaner indoor air – at home if possible, and elsewhere if not, such as a shopping mall or community cooling or clean air centre.

We recognize and appreciate the tireless efforts of local governments, Indigenous Governing Bodies and communities who have worked diligently over the years to protect their communities from the harmful impacts of wildfire smoke. Your dedication to safeguarding health and well-being is invaluable.



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ADDITIONAL RESOURCES

- Island Health [Wildfires](#) webpage
- BCCDC [Wildfire Smoke](#) resources, translated into 10 languages
- Province of B.C.'s [Wildfire Preparedness Social Media Package](#)

CONTACT US

Island Health's [Health Protection and Environmental Services Locations](#)

Email Health Emergency Management BC at hembc@islandhealth.ca